a mammary gland specific enhancer];

a DNA sequence encoding a signal sequence functional in bovine mammary gland secretory cells; ~~and~~

a DNA sequence encoding a polypeptide of interest;, and

a regulatory sequence that promotes expression of the DNA sequence encoding the polypeptide of interest,

wherein the transgenic or chimeric bovine or a female descendant of the transgenic bovine is disposed to express [expresses] the [transgene] construct in mammary secretory cells such that the polypeptide of interest is detectable in milk produced by the transgenic or chimeric bovine or [a] the female descendant of the transgenic [or chimeric] bovine;

wherein the polypeptide is heterologous to the milk of a natural bovine ~~a bovine protein undetectable in milk of a natural bovine, or a heterologous polypeptide~~.

2
115. (Amended) A method of producing a polypeptide, comprising recovering milk from the transgenic bovine or female descendant thereof, or the chimeric bovine of claim 1~~14~~, wherein the milk contains the polypeptide.

116. The method of claim 115, further comprising purifying the polypeptide from the milk.

117. The method of claim 116, wherein the polypeptide is an immunoglobulin.

Please add the following new claims:

118. A method of preparing a bovine for production of a polypeptide of interest;

introducing into the genome of mammary gland cells of the bovine a construct comprising

a DNA sequence encoding a signal sequence functional in bovine mammary gland secretory cells; and

a DNA sequence encoding a polypeptide of interest, and